

DATE IN 3/1/99	SUSPENSE 3/22/99	ENGINEER DC	LOGGED BY W	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

# NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

2040 South Pacheco, Santa Fe, NM 87505



2249

## ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATION FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

### Application Acronyms:

- [NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]  
 [DD-Directional Drilling] [SD-Simultaneous Dedication]  
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]  
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]  
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]  
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]  
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

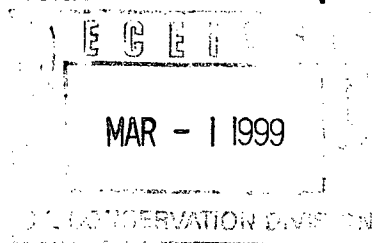
### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Directional Drilling  
☐ NSL ☐ NSP ☐ DD ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement  
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR



### [2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

- [A] ☒ Working, Royalty or Overriding Royalty Interest Owners  
 [B] ☒ Offset Operators, Leaseholders or Surface Owner  
 [C] ☐ Application is One Which Requires Published Legal Notice  
 [D] ☒ Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office  
 [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,  
 [F] ☐ Waivers are Attached

### [3] INFORMATION / DATA SUBMITTED IS COMPLETE - Certification

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data (including API numbers, pool codes, etc.), pertinent information and any required notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Mark Stodola  
Print or Type Name

*Mark Stodola*  
Signature

Reservoir Engr.  
Title

2/25/99  
Date



DHC-2249

COMMERCIAL RESOURCES  
(505)-827-5724

SURFACE RESOURCES  
(505)-827-5793

MINERAL RESOURCES  
(505)-827-5744

ROYALTY  
(505)-827-5772

State of New Mexico  
Commissioner of Public Lands

Ray Powell, M.S., D.V.M.  
310 Old Santa Fe Trail, P. O. Box 1148  
Santa Fe, New Mexico 87504-1148  
Phone (505)-827-5760, Fax (505)-827-5766

PUBLIC AFFAIRS  
(505)-827-5765

ADMINISTRATIVE MGMT.  
(505)-827-5700

LEGAL  
(505)-827-5713

PLANNING  
(505)-827-5752

June 4, 1999

Phillips Petroleum Company  
5525 HWY. 64  
Farmington, New Mexico 87401

Attn: Mr. Mark Stodola

Re: Downhole Commingling Application  
Gobernador Well No. 6  
Unit Letter H, Section 15-29N-05W  
Gobernador Pictured Cliffs and Blanco Mesaverde Pools  
Rio Arriba County, New Mexico

Dear Mr. Stodola:

Your application to downhole commingle the Gobernador Pictured Cliffs and Blanco Mesaverde production from within the wellbore of the above-captioned well was received on March 1, 1999.

Since it appears that all the New Mexico Oil Conservation Division's rules and regulations have been complied with, and there will be no loss of revenue to the State of New Mexico as a result of your proposed operation, your request for downhole commingling is hereby approved. Any deviation from the substance of your request will be sufficient grounds for rescinding our approval. Our approval is subject to like approval by the New Mexico Oil Conservation Division and the Bureau of Land Management.


Please submit your \$30.00 dollar filing fee.

Also, please submit the appropriate approvals from the New Mexico Oil Conservation Division and the Bureau of Land Management.

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

RAY POWELL, M.S., D.V.M.  
COMMISSIONER OF PUBLIC LANDS

BY:   
JAMI BAILEY, Director  
Oil, Gas and Minerals Division  
(505) 827-5744

RP/JB/cpm  
Enclosure  
xc: Reader File

(OCD--Attention: David Catanach, Ben Stone

BLM

"WE WORK FOR EDUCATION"

## DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

## DISTRICT II

811 South First St., Artesia, NM 88210-2835

## DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico  
Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429Form C-107-A  
New 3-12-96

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

## APPLICATION FOR DOWNHOLE COMMINGLING

Operator Phillips Petroleum Company Address 5525 Hwy. 64, Farmington, NM 87401

Gobernador #6 H, Sec. 15, 29N, 5W Rio Arriba

Lease Well No. Unit Ltr. - Sec - Twp - Rge County

OGRID NO. 017654 Property Code 009255 API NO. 30-039-22471 Spacing Unit Lease Types: (check 1 or more)

Federal ☒ State ☐ (and/or) Fee ☐

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	77440 Gobernador PC		72319 Blanco MV
2. Top and Bottom of Pay Section (Perforations)	3602' - 3773'		5594' - 6016'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Gas & Oil - Flowing: All Gas Zones: Estimated Current Measured Current Estimated Or Measured Original	a. (Current) 540 psi (est.) b. (Original) 1288 psi (est.)	a. b.	a. 800 psi (est.) b. 1234 psi (est.)
6. Oil Gravity (°API) or Gas BTU Content	1145		1083
7. Producing or Shut-In?	SI		Producing
Production Marginal? (yes or no)	Yes		Yes
• If Shut-In, give date and oil/gas/water rates of last production Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data • If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 9/98 Rates: 7 mcf/d	Date: Rates:	Date: Rates:
	Date: Rates:	Date: Rates:	Date: 12/31/98 Rates: 36 mcf/d 3 bwpd
8. Fixed Percentage Allocation Formula - % for each zone	Oil: % Gas: %	Oil: % Gas: %	Oil: % Gas: %

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? ☐ Yes ☒ No  
If not, have all working, overriding, and royalty interests been notified by certified mail? ☒ Yes ☐ No  
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No

11. Will cross-flow occur? ☐ Yes ☒ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☐ Yes ☐ No (If No, attach explanation)

12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No

13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)

14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☐ Yes ☐ No

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). R-10770

## 16. ATTACHMENTS:

- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- Production curve for each zone for at least one year. (If not available, attach explanation.)
- For zones with no production history, estimated production rates and supporting data.
- Data to support allocation method or formula.
- Notification list of all offset operators.
- Notification list of working, overriding, and royalty interests for uncommon interest cases.
- Any additional statements, data, or documents required to support commingling.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Mark Stodola TITLE Reservoir Engr. DATE 2/25/99

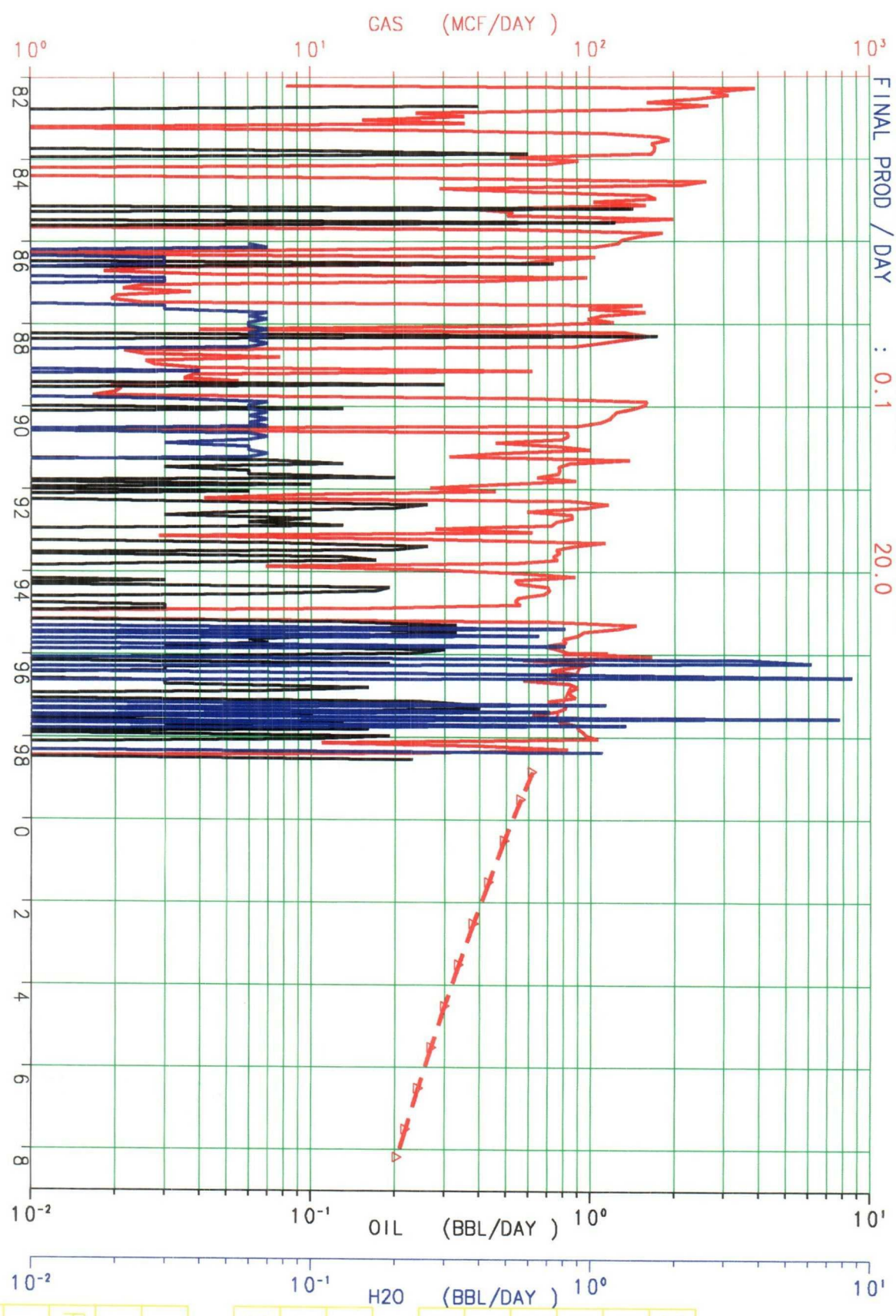
TYPE OR PRINT NAME Mark Stodola TELEPHONE NO. ( 505 ) 599-3455

1/96-8/98 9/98-LIFE

INITIAL PROD / DAY : 95.8  
 REMAINING LIFE : 2.67  
 HYPR(0.33) DECL % : 16.60  
 CUM PRODUCTION : 70175.  
 FINAL PROD / DAY : 0.1

Current Cums

464495. MCF GAS  
 427. BBL OIL  
 1081. BBL H2O



GOVERNADOR (PICTURED CLIFFS)

RESVR- 004 : GOVERNADOR (PICTURED CLIFFS)  
 WELL- 6 CUM MCF = 464642. 15H 29N 5W

DWIGHTS ACT

251,039,29N05W15H00PC API-300392247100  
 PHILLIPS PETROLEUM CO THRU 7/98

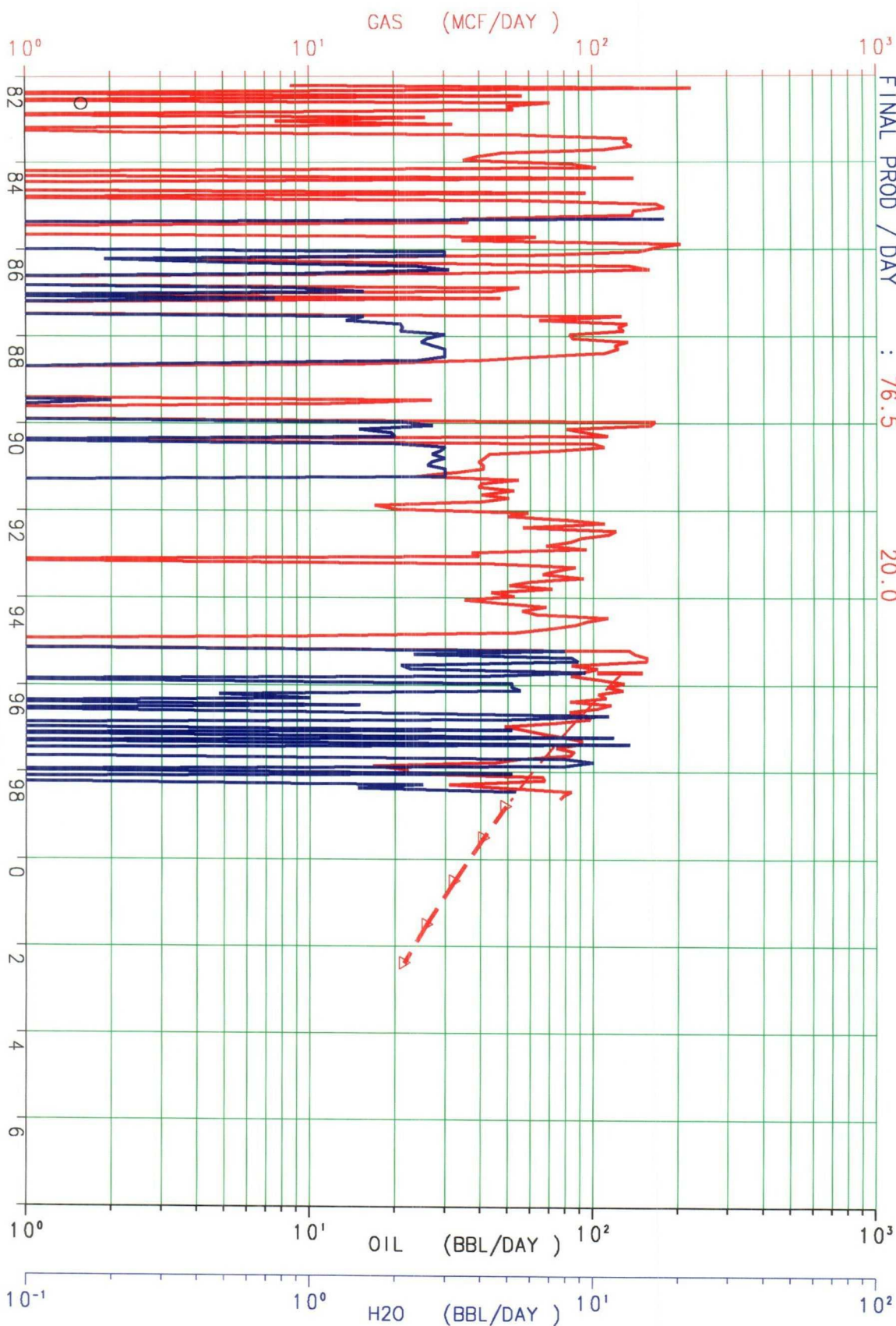
- 2 CYC 4 CYC
- TIME SCALE
- XCUM YCART
- CHG CURVES
- TIME RANGE
- CHANGE FIT
- CONTINUE
- SAVE META
- SAVE PRINT
- LOG-LOG
- SEMILOG
- P / Z BACKP
- 4 IN ONE
- NEXT WELL
- EXIT



10/95-7/98 8/98-LIFE

INITIAL PROD / DAY : 124.7  
 REMAINING LIFE : 2.83  
 HYPR(0.33) DECL % : 35.80  
 CUM PRODUCTION : 80110.  
 FINAL PROD / DAY : 76.5

Current Cums  
 376674. MCF GAS  
 49. BBL OIL  
 7819. BBL H2O



GOBERNADOR  
 RESVR- 004 : BLANCO (MESAVERDE)  
 WELL - 6 CUM MCF = 377091. 15H 29N 5W

DWIGHTS ACT  
 251,039,29N05W15H00M API-300392247100  
 PHILLIPS PETROLEUM CO THRU 8/98

### Gobernador #6 Pictured Cliffs Forecast

<i>Initial Production Rate</i>	=	100 MCFD
<i>Hyperbolic Exponent</i>	=	0.33
<i>Decline Rate</i>	=	10 %

	Month	<b>Monthly MCF</b>
1999	Mar	<b>3,087</b>
	Apr	<b>2,963</b>
	May	<b>3,036</b>
	Jun	<b>2,914</b>
	Jul	<b>2,986</b>
	Aug	<b>2,961</b>
	Sep	<b>2,842</b>
	Oct	<b>2,913</b>
	Nov	<b>2,796</b>
	Dec	<b>2,866</b>
2000	Jan	<b>2,842</b>
	Feb	<b>2,547</b>
	Mar	<b>2,798</b>
	Apr	<b>2,686</b>
	May	<b>2,753</b>
	Jun	<b>2,643</b>
	Jul	<b>2,710</b>
	Aug	<b>2,688</b>

An initial rate of 100 MCFD is anticipated after workover and commingling downhole with the Mesaerde.



# PHILLIPS PETROLEUM COMPANY

FARMINGTON, NEW MEXICO 87401  
5525 HWY. 64 NBU 3004

February 24, 1999

New Mexico Oil & Gas Conservation Div.  
2040 South Pacheco  
Santa Fe, New Mexico 87505-6429

Downhole Commingling Allocation Method  
on the Gobernador #6

Dear Sirs:

Phillips is proposing to utilize the subtraction method on the subject well for approximately six months after actual commingling occurs. After the six month period we will convert to the ratio method as indicated in our commingling application. We believe this will be a more accurate method of allocating production considering that the Gobernador Picture Cliffs interval should be stabilized already and then new production from the Lewis Shale interval will not be stabilized for several months. Further, we believe that commingling these zones downhole will provide an uplift to both reservoirs. This will bring the Pictured Cliffs production up from 80 mcf to 100 mcf.

## Pictured Cliffs Forecast

March 1999	3,087	August 1999	2,961
April 1999	2,963	September 1999	2,842
May 1999	3,036	October 1999	2,913
June 1999	2,914	November 1999	2,796
July 1999	2,986	December 1999	2,866

For example, if the total volume for April 1999 were 5,963 mcf, then the Pictured Cliffs would be allocated 2,963 mcf and the Mesaverde 3,000 mcf. And subsequently, the Pictured Cliffs would be allocated  $(2,963/5,963)$  or 49% and the Mesaverde would be  $(3,000/5,963)$  or 51%.

Sincerely,

PHILLIPS PETROLEUM COMPANY

Mark W. Stodola  
Reservoir Engineer

MS/pc

cc: OCD - Aztec  
BLM- Farmington  
NM Commissioner of Public Lands - Santa Fe

### Production Allocation Methodology

- ◆ Adding New Zone to Existing Zone - Initially Subtraction Method followed by Fixed Allocation Method
  - Subtraction Method ( +/- 1st 12 months)
    - Forecast production rate by month for existing zone utilizing established decline curve for zone
    - Subtract forecasted rate from commingled rate to define new zone rate
    - Utilize subtraction method for +/- 12 months until new zone rate stabilizes, then utilize fixed allocation method with current rates
  - Fixed Allocation Method (after Subtraction Method)
    - Utilize forecasted rate from established decline curve for lower zone
    - Calculate upper zone rate by subtracting lower zone rate from commingled rate
    - Lower zone allocation =  $\frac{\text{Lower zone rate}}{\text{Commingled rate}}$
    - Upper zone allocation =  $\frac{(\text{Commingled rate} - \text{Lower zone rate})}{\text{Commingled rate}}$



**GOVERNADOR #6  
WI/ORRI/NRI OWNERS  
MAILING LIST**

WILLIAMS PRODUCTION COMPANY  
BURLINGTON RESOURCES OIL & GAS COMPANY  
ACOMA OIL CORPORATION  
TIM B ALLISON  
GEORGIA F ANDERSON LIVING TRUST  
AMIRA F BOISSON  
MARIAN F. EARP MINFRAI TRUST  
~FRANCES MEYER, TRUSTEE  
FRANK B GERSBACH AND MAE B. GERSBACH  
HOMER F JOHNSON  
JESSIE L. JOHNSON  
VIRGINIA JOHNSON  
MCALLEN NATIONAL BANK, INDP EXC O/E/O  
~JEWEL N. LANIER  
RUTH E MCBRIDE  
CHARLES W MCCARTY TRUST, NATIONSBANK TRUST OIL & GAS ACCOUNTING  
JENNY POEGGEL AND MARY B. POEGGEL  
C/O C. H. DUPLIX  
DOROTHY E. DENMAN  
DORATHEA S. BARNES  
GUADALUPE B. MCCARTY  
DEPARTMENT OF INTERIOR-MMS  
~ROYALTY MANAGEMENT PROGRAM  
AMOCO PRODUCTION COMPANY  
REECE B. ANDERSON  
JERRY J. ANDREW  
PAMELA GRAY BALDWIN  
ROBERT E. BEAMON  
ASHLEY BRACKEN & SUSAN BRACKEN  
JEREMY S. DAVIS  
WATERS S. DAVIS III  
BARBARA REESE BINGES  
TED E. DUFF TRUSTEE OF  
~THE T. E. DUFF TRUST  
DUFF-LEACH FAMILY TRUST JUDITH DIANNE DUFF LEACH, TRUSTEE  
C/O J DIANNE DUFF LEACH  
GAIL A DURHAM  
ESTATE OF ALBERT E. FAGAN DONALD E. FAGAN INDPNDNT EXEC  
DAVID H. GRAY  
CHASE BANK OF TEXAS, N.A.  
AGENT & ATTORNEY-IN-FACT  
TRUST MINERALS SEC-#1049309  
JOHN L. GRAY  
CHASE BANK OF TEXAS, N.A.  
AGENT & ATTORNEY-IN-FACT  
TRUST MINERALS SEC - 1049310  
DAVID HENDERSON  
MARY DOLL INGRAM  
RICHARD A JENNINGS  
GARY ROBERT JOHNSON  
PAULINE P JOHNSON  
NATIONSBANK, N.A.  
~TRUSTEE FOR EULA MAY JOHNSTON  
ESTATE OF JAMES J. JOHNSTON  
V. A. JOHNSTON FAMILY TRUST, KATHERINE PREWITT & MICHAEL A CHESSER, TRUST  
GLORIA WYNNE LANKFORD  
ESTATE OF PATTIE ANN BEAMON LUNDELL ROBERT WALTER LUNDELL  
CYNTHIA GRAY MILANI  
CHASE BANK OF TEXAS, N.A.  
AGENT & ATTORNEY-IN-FACT  
TRUST MINERALS SEC-#1049313  
THE NORDAN TRUST  
PEARL NEUGENT NORDAN ESTATE, MARIAN NORDAN HARWELL  
HARRY D. PROTER TRUST  
C/O TRUST OIL & GAS  
DAVID ELBERT REESE  
ELIZABETH GOODWIN REESE  
CATHARINE GRAY REMENICK  
CHASE BANK OF TEXAS, N.A.  
& A//F, TRUST MINERALS SECTION-#1049313  
ROGERS GIBBARD TRUST  
C/O SUSAN ROGERS EVELAND  
DAVID WALKER SMITH  
MARJORIE FISHER SMITH  
UNION OIL COMPANY OF CALIFORNIA  
ATTN: REVENUE ACCOUNTING  
REBECCA ANN REESE WARD

**GOBERNADOR #6  
WI/ORRI/NRI OWNERS  
MAILING LIST  
(CONTINUED)**

L. DORIS WILLIAMS TRUST, WILLIAM P. TRAYLOR  
~& JOHN G. HEARD, TRUSTEES  
B. WYNNE WOOLLEY JR. & DAVID MARTIN WOOLLEY  
CO-TRST OF THE B WYNNE WOOLLEY JR TRUST  
U/W/O LOTTIE PLUMMER WOOLLEY  
DAVID MARTIN WOOLLEY & B. WYNNE WOOLLEY JR  
~CO-TRUST OF THE DAVID MARTIN WOOLLEY TRUST  
U/W/O LOTTIE PLUMMER WOOLLEY

**GOBERNADOR #6  
OFFSET OWNERS  
MAILING LIST**

**TEXAKOMA OIL & GAS COMPANY  
ONE LINCOLN CENTRE  
5400 LBJ FREEWAY, SUITE 500  
DALLAS TX 75240-6236**

**BURLINGTON RESOURCES OIL & GAS COMPANY  
P O BOX 4289  
FARMINGTON NM 87499-4289**